From There to Here

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From There to Here: Newton Harrison/Helen Mayer Harrison

We have been asked many times how we got from there to here. ›Here‹ being the proposal in the now to generate biodiversity ribbons across the high grounds of the European peninsula that would, over time, purify the top end of most of the rivers in Europe, while generating ecological redundancy in both grasslands and forest. ›There‹ being the 1970 or '71 of our beginnings as ecological artists. That is, how did we come together as a collaboration, and how did it come to pass that we took up the ecology as subject matter. Most importantly, we have been asked for this particular essay to reflect on our work and to see the progression from an initial decision, made in '69–'70, to do no work that did not in some way look at ecosystemic well-being.

One fundamental belief that drives our work perhaps is most clearly stated in a conversation we had in the mid-'70s with Herbert Marcuse: The revered theoretical leader of the then new left on our campus (although not so revered by our Chancellor or the University Administration statewide) was internationally famous as a member of the Frankfurt school and for books such as *One Dimensional Man*. He took sharp issue with our work.

He said,
with some force and at much greater length,
»Your work on ecosystems is a form of repressive de-sublimation
which takes energy away from the real issue
which is the class struggle.«

I said,
improvising quickly,
»The whole ecosystem can be seen as an unacknowledged
endlessly exploited
underclass.«

However, in a later conversation shortly before his death, each of our positions had enlarged sufficiently to encompass the other.

The works we did during the early seventies took the shape of museum installations. They were portable farms, fish farms, worm farms, portable orchards and we called them the Survival Series. They were done in part to teach ourselves as urban people how to grow things, principally our own food. However, the processes involved in doing so quickly revealed ethical issues and ecological contradictions. One example, the 1971–72 **Portable Orchard**, Survival Piece #3, was an eighteen tree citrus and avocado installation, where the bearing dwarf trees were planted in hexagonal boxes filled with a cubic meter of earth each, at the Art Gallery of California State College, Fullerton. The exhibition,with its accompanying citrus feast, (from which many walked away with somewhat acid stomachs) was designed as an ironic response to the destruction of local orchards by massive development, with the accompanying traffic jams and smog, in the once appropriately named Orange County, in Southern California. The aesthetic power of the installation was valued by many. The irony that we, as artists, might be preserving the last orchard in Orange County in a museum, was lost to all but a few. After over twenty-five years, some of the trees still survive in their boxes in the plaza outside the art gallery but the vast acres of orchards are only a memory.

The brine shrimp work, Survival Piece #2, was an environmental portrait entitled **Notations on the Ecosystem of the Western Salt Works with the Inclusion of Brine Shrimp**. It was designed for the Art and Technology Exhibition that was held earlier in 1971 at the Los Angeles County Museum of Art. It took an entirely different direction. Outdoors in the entrance plaza of

the museum a low wooden structure containing four ten by twenty foot boxes was placed. Each box was filled with water of a different salinity from sea water to brine ten times saltier than sea water. The algae, Dunaliella, which produces carotene as a response to increasing salinity, was introduced into each of the four ponds. The box then became a three-dimensional color field painting going from green to yellowish to orange to brick red. At this point, the brine shrimp, Artemia, were introduced. As they ate the algae, the color was drained from the work. The algae and the brine shrimp make one of the simplest discrete ecosystems extant, as they and only they can exist under these extreme differences in salinities.

Although, indoors, in their boxes under lights, **Portable Orchard** was delightful to see and smell and traverse, it was energy expensive. At the same time, the system of the brine shrimp farm simply got more stable and stronger over time, with the sun acting as the engine. It offered a visually powerful image, but the strong smell was less than pleasant. Neither work, however, gave sufficient information as to our intentions, nor did they adequately express our concerns and the ideas behind them. The signals became clear. We decided to chose a direction other than simple sculptural installations with living material. We began improvising ways to present whole systems by adding text, photographic and drawn or painted images and narrative to the work in a new format. Installations alone simply were not adequate to carry all the information.

None-the-less, the decision to present water farms or orchards in a museum, and allowing that decision to determine all others, was entirely consistent with what was happening in conceptual art at that time. One of the differences between our work and others was that we chose from the beginning to include the utilitarian as an important layer in our work. Let us very briefly explain what such a decision meant within the field of art in the late 60's and early '70s. It may make clear how artists like ourselves became ecologists of a sort and began working intensively with elements from the biological sciences, later with the cognitive sciences and, thereafter, with political and economic systems, that guide, and often determine, the nature of regional planning.

The »why is this art?« question often came up.

One of the tenets of conceptual art, which strongly influenced our early collective art-making, was to make a single decision and follow it relentlessly to its unknown, unknowable outcomes. The outcomes were simply the result of continuous creativity, investigation and enactment, referenced always to

that initial, single decision. But that single decision was always changing, complicating itself by virtue of the continuous creativity it engendered. Some of our colleagues chose to work from elements derived from geometric forms and simple or complex patterns. Sometimes these decisions led to performance and use of diverse media from growth systems to video. Sometimes the structure of language was subject matter. Sometimes political and social injustice were subject matter. In choosing the path to only do work that advantaged the life web, certain issues quickly became evident. The life web as subject matter entailed working with endless complexity and, on our part, endless learning.

Earth itself seemed to us important enough to become subject matter by itself and so we began the process of making earth in museums. At that time making »earth«, or rather making viable soil for farming systems as a kind of public performance that we repeated many times, was a response to the fact that so many other activities led to the making of deserts. Not incidentally we were teaching ourselves the discipline of actually making the earth we used in our portable farms.

To restate the above, by the early seventies, the ideas and beliefs driving modernism, the typical »framing for understanding«, »framing for expression«, »framing for representation« »framing as evidence«, »framing for production« so much a part of the arts, commerce, and the sciences, in fact so much a part of every day life, ceased making sense for us. Nature, the life web in its entirety, appeared interactive, interdependent, mutually evolving and, therefore, in various degrees indeterminate and frameable only in a narrow way. As a result, any central images that appeared seemed to exist for only a moment and thereafter to fade back into a pattern of moments grouped within moments.

Reflecting back for a moment, neither **Portable Orchard** nor **Notations on the Eco-system of the Western Salt Works** (with the inclusion of Brine Shrimp) nor the earlier processes of making earth, in the form they took, could carry the information or rather the story of the transformation of Orange County, which was the reason for making Portable Orchard. Nor could the Brine Shrimp ecosystem describe itself as one of the simplest discrete ecosystems in sufficient clarity, nor could Making Earth as a performance carry the notion of living earth nor the larger implications of topsoil destruction without a text such as exists on the prior pages.

Therefore, we chose to establish a new conversation, **The Lagoon Cycle**, a three hundred fifty foot long mural, eight feet high, in sixty odd parts. This philosophical poem, interspersing text and giant hand painted photographic images, done from 1974 to 1984, was one of the forms we chose to express many of these ideas. In some ways it functioned as storyboards for a movie. It also operated as a picaresque novel with seven chapters. It operated in seven rooms, one for each of the Seven Lagoons, and took up five thousand square feet. It began:

»For us it was a moment
We didn't know it had begun until we
were already in the middle
then we looked forward and knew how
it should end
but we didn't know how to get there.
You could as well say that knowing the ending
we worked backward to what we must have been
to begin it
as forward to what we must become to end it.«

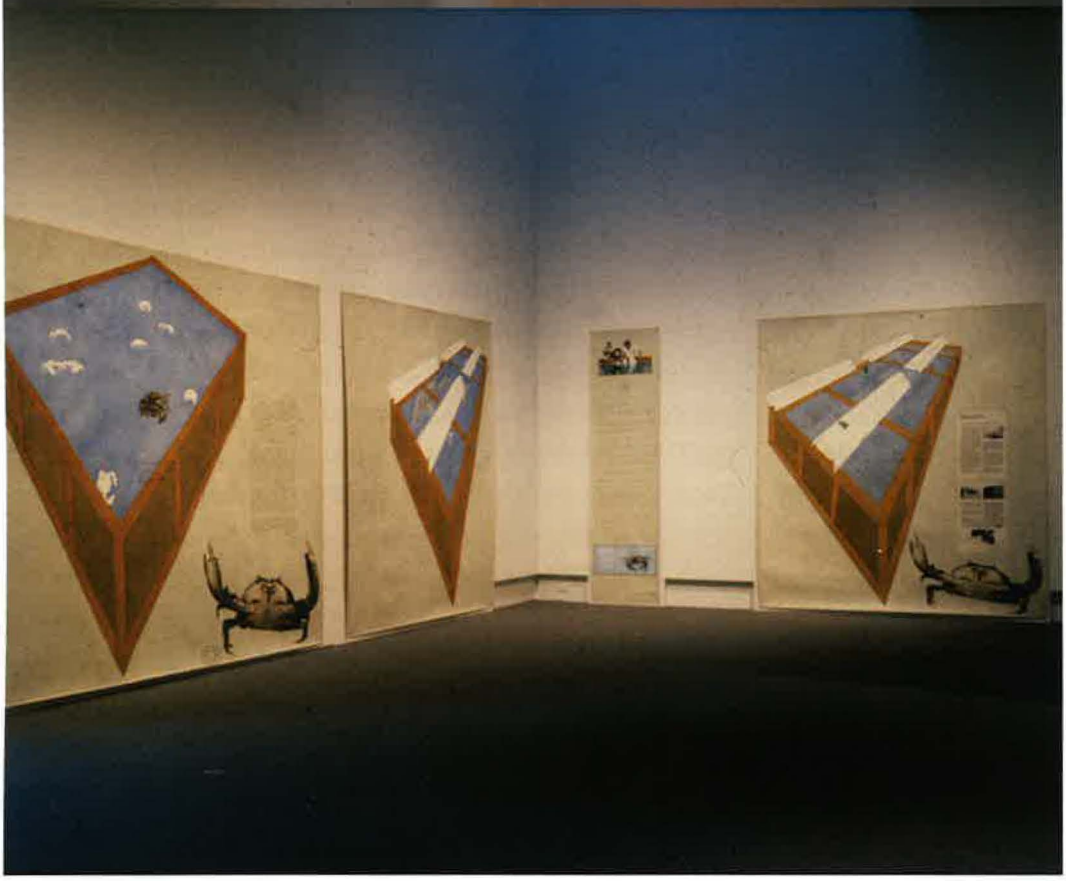
The **Lagoon Cycle**, as it reveals our process and our growing ecological understanding, is semi-autobiographical. In a way it tells the story of the ›greening‹ of ourselves. The end of one part often reflects back to the beginning and throws new light on other parts as we stated above. We chose to tell the story from the points of view of two characters – a Lagoon maker and a Witness – action and reflection. They observed, heard and responded to different things during commonly experienced events. Their differing characters, perceptions and beliefs form the story within the story. In the beginning the characters are delineated as male and female, towards the end action and reflection co-join and the characters assume greater similarity.

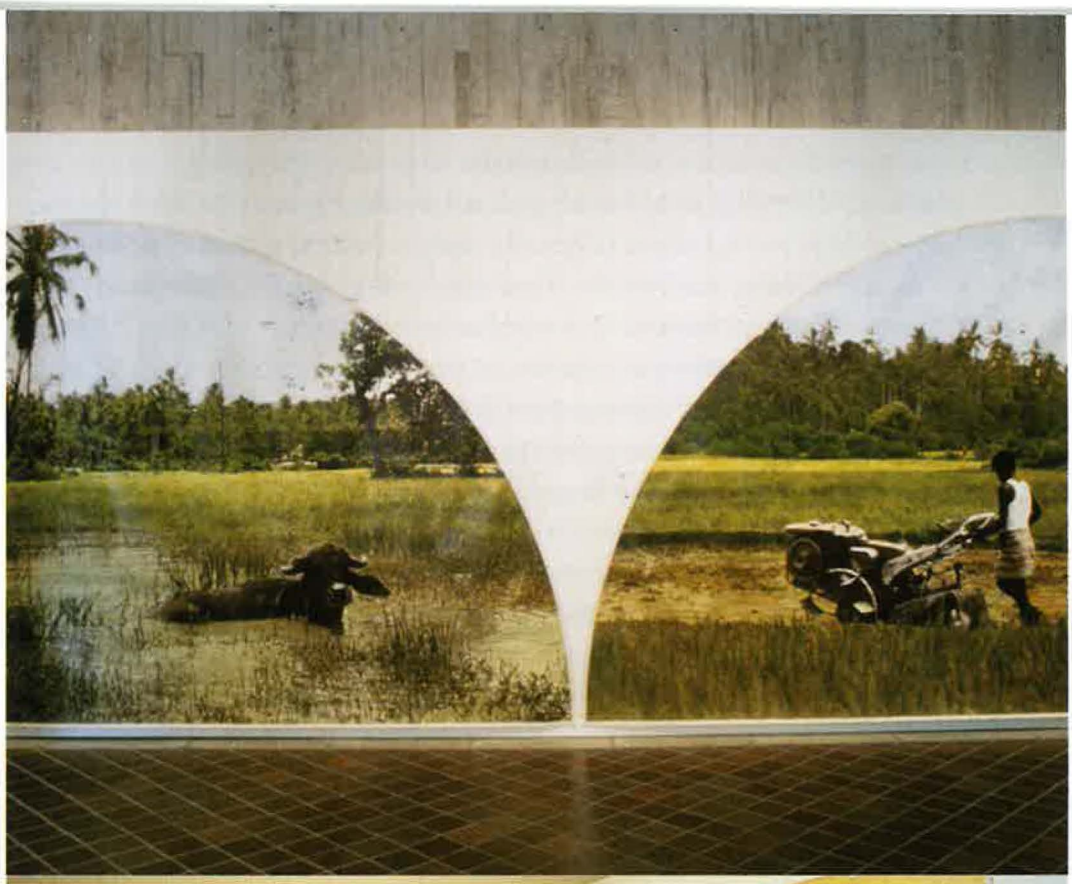
One of the germinal works that led to the conception of **Peninsula Europe** some twenty years later dealt with the rivers and drain basins of the Central Valley of California.

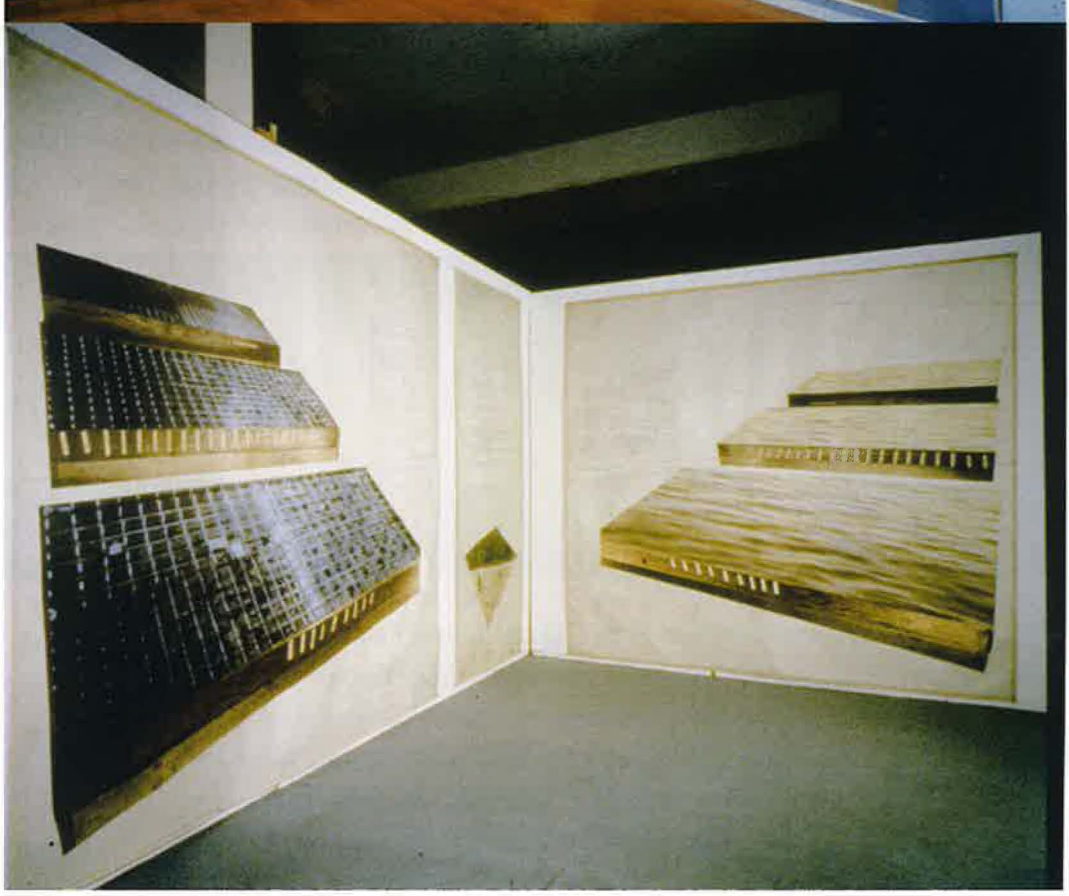
This reflected on a place that was in our own backyard so to speak. **Meditations on the Condition of the Sacramento River, the Delta and the Bays at San Francisco** was our response to the condition of the land and our first engagement with deep ecology.

The work was called **The Sacramento Meditations** for short, and was done in 1976–77. It was the first work that we did that had no central image, unless one could consider the repeated use of the images of the state and of the central valley within it as a central image. Our presentation took the form of nine hand worked maps, several hand drawn, several satellite images, several special maps from various resources agencies and several regular maps of the state of California with the Central Valley colored in. These variously represented the state of the farming, the soil conditions, the systems of land division and of water use in the Central Valley. The entire array was approximately seven feet high and sixty feet long and was exhibited in the San Francisco Museum of Modern Art. But this was by no means the whole work. There were, in addition, brief presentations on public radio and television. There was a citywide poster campaign in which 11 different posters began with the question, »For instance...if.....« and ended with »What if all that irrigated farming isn't necessary?« There were brief texts after that opening statement, each pointing to different contradictions between current practices and sustainable practices. A graffiti campaign was mounted, written in chalk on the streets, with various comments such as »Somebody's crazy,

The Book of the Seven Lagoons







they're draining the swamps and growing rice in the desert.« or »He who builds on a flood plain must expect to be visited by water.« There were several large earth colored billboards, each imprinted with only one word in blue. The word was WATER. There was a videotape of a Water Board Meeting and bits of ›advice‹ to a number of important state water personnel inserted in the personal columns of the local newspapers. Each bit of advice, ironically. was derived from the eight fold path of the Buddha and read, »Dear Ron Robie (then Director of Water Resources): Right Water Thought« or »Dear Jerry Brown (then Governor of California):Right Water Action.«

The work was originally created at the request of the Floating Museum of San Francisco, who had initially asked us to do a work about the San Francisco area. Instead, looking at the Bays, our attention was drawn inland to the delta and then to the whole rich and intricate water system of the region. The feedback from this experience, as well as a year of research, a good part of which was spent at the Water Resources Library at the University of California at Berkeley, taught us much. The formal discipline was to condense, yet keep clear this much information and to imbue it with our thoughts and our feelings in about a 20 minute read. The idea was to present a vision that would explode in the mind of the interested person. The aesthetic discipline was to find the linguistic means to do it. The work is a chant and was made to be read aloud. For instance, there are nine texts that can be read in approximately twenty minutes. The First, Second, and Last are included here. This work was quoted from almost verbatim by the head of the Resources Agency of California in the Los Angeles Times. None-the-less it had no noticeable effect in the larger environment, although it affected us profoundly. Essentially it was the story of industrialized farming, of the so-called »green revolution« which has become the global model. In fact, it tells the story of global industrialized anything, where the basic purpose has become the economic bottom line, and the nature of what is dealt with has been subsumed for profitability.

This work became a guiding metaphor, a lens through which many existing cultural landscapes in the process of being transformed into industrial landscapes could be dealt with by ourselves as artists, with the idea that new and different possible histories could become available and open for exploration and criticism. The discipline here, for us as artists, was: Could we say all that we knew in a condensed and empowered way so that one could read and at least partially grasp very large and complicated ideas in a very short time?

Many works dealing with ecosystems in cities such as San Jose, Baltimore, San Francisco, Pasadena, Atlanta, and in Europe – Cergy-Pontois in France, Kassel, Germany, Dresden, Germany, and several smaller cities with several exceptions, most of the work remains in proposal form. The urban works have not been included in this essay.

The idea of a new history was explored in a subsequent work ten years later, called **Atempause für den Save Fluss**, or **Breathing Space for the Sava River**.

It began when the Director of Research for the Berlin Botanical Gardens, Dr Hartmut Ern, wanted to know if we could do a work in words and images that would make a vision to help enable a marvelous place, a flood plain of some 280 square kilometers, to become a protected area, a nature reserve. There were others, ecologists, politicians and ordinary citizens working to this end, and he asked if we would lend our abilities to this effort. We agreed and while all our friends went to the Venice Biennale we flew with him to Yugoslavia to look at birds and flowers and flood plains and houses that were still held together with wooden pegs.

We rented a car and for four days he drove us through the area of the would-be reserve, which was in Croatia, perhaps an hour from Zagreb. For all four days he talked steadily from 7 a.m. to 10 p.m. without tiring. He told us the area was a 280 square kilometer fragment of what had once been a no-man's land between the Austro-Hungarian and the Ottoman Empires, and thus had remained sparsely populated and relatively untouched for hundreds of years. A fragment of this historical cultural landscape still existed in the flood plain of the Sava River and one of its tributaries about 30 kilometers down river from Zagreb. It consisted of an intact original flood plain ecology, a native oak forest and small villages and farms, all operating in such a way that one part reinforced or sustained the other. The forest was lumbered selectively over a one hundred to one hundred and fifty year period. The animals ranged free in the spring, summer and fall in the forest flood plain area. The pigs were fed corn two or three times a week so that they wouldn't eat all the acorns, thus permitting them to trample some of the acorns into the ground, helping to regenerate the forest thereby. By the time Dr. Ern was finished we were exhausted but fascinated, oddly educated by an eccentric, complex perception that resonated with our own. We had seen the land from various perspectives – ecological, historical and social. We had met with many people, almost all of whom offered us homemade slivovitz. We were exhausted, continually in a slightly inebriated state, but most of all intrigued, as he had known we would be. Of course, we agreed to do this work.

Now this land out of time, this proposed reserve area was surrounded by industrial farming. It was under attack by the effluents of ›Industrial Agriculture‹. To preserve it from the fates of other islands and pockets of bio-diversity, which were forced to simplify in response to the excess nutrient input or had been taken over by industrial processes, we attempted to take a whole systems view. We proposed to connect this area to all the other small areas of relatively natural growth from wetland to forest to meadow that existed up and down the river. This new pattern suggested making the flood plain of the Sava River, the land along the river's edge, and the river itself, a nature corridor and a part of the nature reserve. So we developed a work, a large scale installation of hand colored maps, some hand drawn, and room sized photography and drawings and texts that we called **Atempause für den Save Fluss**. It was an extremely popular work. It was written in English and has been translated into German, French, Serbo-Croatian and Japanese. In addition to the travels in five countries that

we arranged, it was a centerpiece for the first traveling group ecological exhibition in America called **Fragile Ecologies**, put together by Barbara Matilisky, who was then at the Queens Museum. The work won the prize for ecological art at the Nagoya Bienale in 1991 in Japan. It was initially supported by the DAAD, the Neue Berliner Kunstverein and the Moderna Galerie which was the Museum of Modern Art in Ljubljana, Slovenia, and later by the Water Department of Croatia, as well.

The work proposed that it was not yet too late to save that region of the flood plain of the Sava River, which although disturbed, was still relatively unstressed. There were a few industries creating serious pollution, a fertilizer factory, a paper making plant. But if these were cleaned up, existing wetlands extended and new ones created, and old oxbows on the river restored and returned to their old use as water purifiers and off-stream storage developed for flood control, then the river plain might continue to be a biological reserve. There was also the possible inclusion of the fishponds along the banks in some areas that added a unique value to the flood plain ecosystem. An image of the river and its banks as a knotted rope emerged in our minds with the river appearing as a rope and all the ecologically provident areas along its course, including sections of old forest, as the knots.

Atempause für den Save Fluss begins like many others of our work with a conversation between ourselves in which we accepted the invitation to join the conversation about the river. The following are various excerpts from the text.

You said
The river is like a forest or for that matter a proton
Its existence itself is part of a larger discourse
and
its discourse like any discourse
is the sum of its improvisations at any moment
and therefore the direction of its becoming is theoretically
invisible

I said
Forgetting the questions of indeterminacy
do you value the discourse about and around this river
as best you can understand it

You said
I fear for this river's well being

I said
Then let us find a way to join the conversation

»The river is asked to process new information
when it hits the alluvial flood plain
and the information is mechanical.
A new shape has been constructed for the river
by the construction of levees and dams
so that the waters are permitted to rise and fall
but not to spread
and the topology for a giant farming system is created thereby.

For the river it is the shape of catastrophe.

The river is asked to process new information
when it hits the alluvial flood plain
and the information is biological.
A change of state has been constructed for the river
by the disappearance of the life that once pervaded it
which depended upon the periodic spread
and withdrawal of waters.

And although an act of compensation has been made
through the creation of a nature reserve –
for the river it is the state of catastrophe.

The river is asked to process new information
when it hits the alluvial flood plain
and the information is chemical
and the information is toxic.
And
where the information is most toxic
by an unexpected congruence of circumstances
and an unexpected confluence of waters
there is an intersection with the nature reserve.

> The hope for the Sava River required Slovenia, Croatia, and Serbia (and Bosnia-Hertzogovina) to agree on reducing the pollution from a fertilizer plant in Croatia, a paper making plant in Serbia, a gravel pit and a coal mine in Slovenia. It required preventing the farm animals from grazing to the river's edge, among other things, as well as adding swamp areas at river's edge. All this while contributing small areas of farm lands to re-introducing the old oxbows as habitat and pollution and flood control. The hope was that

There is still time for a new history for the Sava
which, while corseted within levees
is not channeled in concrete.

There is still time for a new history for the Sava
for its alluvial wetlands
while shrunken
are larger than any in Western Europe.

There is still time for a new history for the Sava
for its dams are modest and covered with growth.

There is still time for a new history for the Sava
for its flow is not swallowed or reversed.

There is still time for a new history for the Sava
which, while polluted, is not totally poisoned.

There is still time for a new history for the Sava
since the shape of catastrophe
is also the shape of opportunity.

> The pattern of nature reserve, forest, fish pond and meadow dotting the Sava Flood plain, held together by land and water, was attractive to many, particularly in the Croatian Government. The restoration of the ecology was most often just getting out of the way and letting nature take its course. Even the World Bank got interested in cleaning up some factories along the river.

It was six months later. The D.A.A.D., the Neuer Berliner Kunstverein and the Moderna Museum in Ljubljana had co-jointly sponsored the work. It was shown in Berlin and then at an exhibition at the Modern Museum of Ljubljana, where despite a series of newspaper articles and a television program on the work, almost nobody came to the opening. We were told that Slovenia was having its first vote that day on withdrawing from Yugoslavia. Violence was in the air. Rebellious Kosovo Province was under attack by the military. There had been a Mother's March in which mothers from Slovenia and Croatia had gone south to Kosovo en masse to bring their sons back from the army. They would not have their Yugoslavian sons killing other Yugoslavians. There for the first time we were asked if America could not stop Milosevic from ethnic violence. We asked at the Consulate, but they asked us more or less politely to keep out of it, saying that it was not in America's interest to intervene in any way.

Several months after that we were in Prague in what was then Czechoslovakia, working with a team of students at the Academy of Art and Architecture considering what could possibly be done with the disaster of the vast, open brown coal pit mines. These mines made moonscapes of shocking proportions in the areas around Karlovavary and Moste, as well as other places. The director of the Zoological Society in Zagreb had invited us to speak about our vision for the Sava River at a conference of the International Zoological Society, in Dubrovnic. He had been worried that the conference was going to be too much about the usefulness of water, too little about eco-systemic values. He said the World Bank had become interested in the Sava, partly we were told, as a result of our work. But the day before we were to come, we received an urgent telephone call from him saying, »Don't come. The terrorists are threatening to blow up the trains!«

Bringing this work on the Sava River, done in the late eighties, into our present. Realizing that the Sava gave the lower Danube one-third of its water. Realizing that if the Sava ran clean, the outcome for the Danube estuary as it flowed into the Black Sea would be a happy one. The Sava and the Mulde drain basins began to appear as elements in a curious scale of drain basin reclamation possibilities. The reclamation of the former was ecologically easy, but intractable culturally. The latter was culturally more or less easy, but ecologically intractable.

The haunting aspect of the Sava discourse for us was watching the ecological conversation, as with

any ecological conversation, really eco-cultural in nature, joyous in that something valuable might happen for the good of all, and watching that conversation change under pressure from terror and recrimination as ethnic cleansing became a reality and violence prevailed.

From another perspective, one could imagine the nature reserve as an attractor, perhaps a strange attractor that finally attracted bullets to itself in this frenzy of ethnic cleansing, where soldiers stood on one side of the Sava and sprayed bullets on anything that moved on the other side and even aimed at the houses. They were attempting to cleanse the culture of its own history. Thereafter, we did no work that did not in some manner include eco-cultural interchange.

The Sava River work marked a change away from criticism and toward more transformative processes in our work.

We should restate that, like the rest of our work, **Peninsula Europe** is based on conversations between ourselves and conversations with others. This method is our own invention, coming about as we struggled for ways that might be exemplar of our beliefs in co-operation, collaboration and discourse, reflecting what we consider to be universal modes of behavior.

Over time, we, along with others in other disciplines, came to understand that the process of fragmentation was being enacted globally by various cultural entities – governments, corporations, even organized religious groups. which considered these behaviors to be necessary for their survival and well being. Moreover, this collective creation of separate and competing parts, this fragmentation of our thinking and behavior, was fundamentally integrated into our belief systems – actually embedded over time in our neural structures, and therefore very difficult to change – and was supported by or justified by legal systems based on outmoded and unquestioned beliefs. Many of the ideas and the works that follow deal with our attempts to make visions for the re-unification of fractured parts.

For instance, in 1993, at the request of the Bauhaus Dessau and supported by the Minister of the Environment of Saxon-Anhalt, we made a work that addressed the Mulde River drain basin which, given the brown coal open pit mines around Bitterfeld, appeared to be much abused. Bauhaus Dessau, in the early nineties was an amazing place for Americans to work. Workshop Masters such as Maholy-Nagy, Josef Albers and Johannes Itten had left Germany after Hitler closed down the »decadent Bauhaus« and escaped to America. Over time they had a major influence on American art and design education, and our own as well. (For instance, I, Newton, taught the Albers' color course at Yale, when I was a graduate student there, and Albers' »Interaction of Color«, and Wolfgang Kohler's »Gestalt Psychology« which was part of Helen's studies in psychology; were significant texts for us both.) At the Bauhaus today, Gropius, via his architecture, is still ever present. But, oddly, many who worked there, except for the staff of the small museum and bookstore and those directly involved in the history of art and architecture, had paid little attention to the powerful impact this small place and very special ensemble of people had upon the history of modern art and architecture in America.

In previous work at Bauhaus Dessau on the problems of the pit mines of Bitterfeld, we had found that many millions of tons of toxic earths had been produced by the chemical companies and the mining companies over the period of the past one hundred and fifty years and the residue had been dumped on and in the land. This area was further contaminated by the tons of debris left by the Russian military when they abandoned the area. Then the waters were further damaged by mine tailings from the upper basin of the Mulde River and unmediated, or minimally treated sewage from local

communities as well as agricultural and animal wastes from farming areas. And then there was the radioactivity from Aue. All of this participated in devaluing the quality of all life along the river. Studying the area for the third time, with the support of the Ministry of the Environment of Sachsen-Anhalt and the Bauhaus Dessau, a work entitled **The Mulde Watershed** or **Die Mulde – Einzugsgebiet** was developed. The staff and students at the Bauhaus and the designers, collectively researched and with us produced this work which was composed of modified maps, drawings, photos, texts and performances. In it, after discussing the problems of the watershed, we made a series of proposals for remediation. These began discussing the problems created simply by the fragmentation of both the cultural and the ecological environment and proposed a re-examination of both priorities and paradigms and the development of new structures necessary for the reclamation and restoration to health of the Mulde flood plain and the Mulde Watershed. Again, stories nesting within stories, addressing problems embedded within problems. But with important implications for all waters.

The first text ended with: »Do many understand that from the perspective of the ecology the collective operations of industry and settlement behave as an ensemble of monocultural fragments that are rarely tolerant of that which is not themselves ?« The next text began

You said
»We might begin with a Watershed Master
with the authority to bring unity to the parts.«

This text was then transformed in »Peninsula Europe« to apply to the collective drain basin.

On the Need for a Wasserscheidemeister

If
the process of fragmentation reflects
the ways in which human authority divides itself as well
into townships and cities
authorities and businesses and industries
public lands and private lands
with each division looking to the interest of its part
then
who is there to look at this watershed as a whole?

Therefore
we propose a Watershed Meister
an authority for the Mulde River
a proposal based on former tradition
and future necessity
for an authority who will look to the health of the waters
the rivers the forest the meadows the croplands the parks

An authority
who will look to establish viable balances
between multi-use forest succession forest and monoculture
and address such questions as
how much farm and how much industry
and how many inhabitants
can exist in an area
weighed against how much meadow and woodland
and forest and wetland
are needed to sustain an active

interconnected life web
Thus the Watershed Meister would be the entity
whose concern is the eco-security of the whole.
An authority
who will look to the purification of the waters
who will look to the funding of Abwasser systems
for the 50% of the towns without them
who will look towards the prevention of dumping of toxic waste
into the rivers or near them.
who will look to the prevention of livestock
grazing too close to the river
who will look to the regulation of dams
and the removal of some
and the building of fish passages
where dams cannot easily be removed.

An authority
who will look to the building of off stream storage of waters
for flood control for habitat and for wetland purification.
who will look towards the reconnecting of woodlands
and the development of forest
who will look to the building of corridors for wildlife
in waters meadows and forest
Whose work will be funded from a charge
that all who use the waters pay
so that the activities of the entire system may continue
in reasonable and sustainable balance

An Eco-security system for the Einzugsgebiet.

Our thinking about the potential value of the Watershed Master and the other ideas in the Mulde work and their possible ramifications in the transEuropean discourse will appear in the final passage where we will argue that it would not be difficult to imagine the creation of subsidies, diverse economic advantages, the retraining of workers and an enabling eco-tax. And the idea of a Watershed Master is not new in Germany, but has roots in some of the practices of the nineteenth century! But even were steps towards this to begin tomorrow, it would be necessary to keep in mind that we are talking about 25–150 year goals. It takes at least this amount of time for a succession forest to begin to take on the properties of a mature forest. It takes this amount of time for a bio-diverse soil mat to begin to mature. Assuming a history of at least 3,000 years of environmental disruption, a hundred year time frame for renewal is less than 1/30th of the active time of the evolution of culture in Peninsula Europe.

To test certain of our ideas as possibilities for the Mulde Drain Basin we brought together some of the people involved in ecological decision making from Sachsen, where the Mulde River began, to Sachsen-Anhalt, where it ended as it joined the Elbe. The Bauhaus organized this informal conference for us. None of the people from one state had met their counterpart from the other state. Each had held the other responsible for polluting the Mulde. Each was correct!

They met together hesitantly at first, then with great enthusiasm. They agreed to work together on their common problems. Then all went home.

There was no further outcome that we could discern. None-the-less, a new conversation had been placed on the table and sooner or later the obviousness of the ecological need for such meetings should overcome the cultural reluctance.

Although by the early '90s most of our work was being done in Europe, a few works, such as **The Serpentine Lattice**, were still done in America.

In 1993, we were invited to Oregon in the Pacific Northwest by the Douglas F. Cooley Memorial Art Gallery at Reed College to come and think about their place. Their place, which also became our place, turned out to be some 55,000 square miles of mostly clear-cut temperate rain forest.

We chose to think about this 55,000 square miles of mostly distressed terrain to see if we, as artists, might be able to discover a pattern that would permit us to respond at that scale. We designed our response in a work called, **The Serpentine Lattice**. It began as a museum installation with interacting text and image. There was a two and a half meter by ten meter slide presentation with fifty-five sets of three adjacent panoramic images, slowly dissolving from one grouping to the next, revealing the grandeur of the Pacific North West temperate rain forest and the disaster of its destruction from Northern California to Southern Alaska. A ten meter hand-drawn map complemented the slowly moving two and a half by ten meter projection, which expressed the death of the rain forest. There were other accompanying images and, of course, there was text.

This massive conifer forest of the ancient giants, some 3,000 years old and some wide enough to drive a car through, were taller than almost any other trees in the world, except for the tropical rainforest giants, or untouched forest in New Zealand. Until relatively recently, these trees covered the Pacific coastal slopes from San Francisco Bay in California north through Oregon, Washington and British Columbia to Yakatat Bay in Alaska. But clear cutting has modified soil chemistry, destroyed the life in the topsoil and altered climate and created a corridor, an approximately 2,000 mile long corridor, containing about 50,000 square miles of variously disturbed terrain. Thus excerpts from the text that follow also influenced the texts and ideas in **Peninsula Europe**:

From Southern Alaska
to Northern California
North America's last great temperate rain forest is dying.
Everybody knows there's less than 10%
of the old growth left
between San Francisco and Vancouver Island
perhaps 40% in British Columbia
and nobody can agree about Alaska.

By now
everybody knows that a tree farm is not a forest
That is
everybody knows
who thinks about such things.

Now there is enough new information about
and enough old wisdom around
for anybody who thinks about these things
to know that the death of a great forest
is a global tragedy.
Thinking about this forest stretching along the coast
from the Western Hemlock of Southern Alaska
southward through Sitka Spruce
Western Red Cedar and Douglas Fir
to Northern California where the Coast Redwoods carry on

We
being grateful
for the invitation to join this perilous conversation
began to imagine an act of restitution,
You seeing a serpentine
I seeing a lattice.
We
beginning to image North/South continuities
from Yakatat Bay
to San Francisco ,
continuities that would bespeak
the eco-poetics of the whole.

Now looking at healthy succession
looking at old growth remaining
wondering about a matrix
in which to insert a new vision
suddenly,
»You said a lattice
and I said a serpentine.
And you said network the watersheds
and I said a game of Go.«

III

Now, for instance if the gross national product is 5.7 trillion dollars and producing the gross national product is the outcome of exploiting the gross national ecosystem and the gross national ecosystem is not infinitely renewable, then it is not difficult to imagine the gross national product shrinking in concert with an over exploited, less productive, gross national ecosystem.

However, if as a form of recycling, we take 1% of our gross national product and establish an eco-security system not unlike our social security system then roughly 57 billion dollars become available yearly for restoration and reclamation.

Now, if 10% of the proposed eco-security system funding, or 5.7 billion dollars yearly, could be put at the disposal of the rain forest of the Pacific Northwest for a 25 year period then perhaps 140 billion dollars could be made available for the regeneration of these forests, rivers and wetlands, creating job opportunities far in excess of those that would be lost by limiting lumbering.

Then the ridge lines not now in the public domain could be purchased, rivers and watershed ensembles brought to more pristine condition, monocultures complicated and areas of old growth expanded where possible.

Finally, grounds could be reversed so that the ecosystem becomes the field and human use the figure within it, then the gross national ecosystem would take its place, privileged appropriately, as the field within which the political systems, social systems and business systems, that comprise our eco-cultural entity, can exist.

The rest of the text consists of some hard questions, some soft answers, some other images and some metaphors. The response to the work was interesting. For example, shortly after his inauguration President Clinton and Vice-President Gore were to go to Portland to speak to the lumber companies about

limitations on lumbering that would save the old growth. Several of the conservation groups in the area wanted to arrange for them to see the Serpentine Lattice installation. Connections were made by friends who had a good relationship to the White House. The rather harsh negative response was shocking to those friends. However, when the results of the lumber conference were made known, the reasoning was clear. Politics and economics won out. The forests couldn't vote, nor could they make campaign contributions.

On the other hand, the work itself, with its giant panoramas, exhibited many times in many places, had a powerful effect on those who saw it, and we were told it was one of the reasons we were asked to write this book.

Most interesting, however, for ourselves as artists was the pattern that emerged or was created as we looked at the map in relationship to our experiences on the ground and our research and conversations with many. The emerging pattern, which was the shape that literally jumped from the map, happened when the ridge line was drawn from Northern California to Southern Alaska, seen in relationship to the water line of the same length, about 2000 miles. Once it was recognized, the pattern had certain properties. It could reveal the magnitude of the problem. It suggested reclamation at an international scale, which had both ecological and cultural value as well as long term economic ones. Thus, once the questions were posed and the scale determined, the new pattern actually emerged from a perception of the salient topographical features – mountain ridges, coastlines and the lines formed by rivers which grouped in little leaf-like drain basins. And for ourselves as people, the experience of being amongst those trees and retuning our psyches to them was one of the most powerful and poignant of our lives. We see a regeneration pattern, both similar and different, available for the European high ground.

This work raises the problematic of making a concept too early and too big to be integrated into the political, ecological, social, and economic fabric of place. But nonetheless this work represents a basic strategy wherein the artistic, ecological, and ethical agenda is set by asking four questions. **1** Where is here? **2** How big is here? **3** What's happening here? **4** What do we see as needed in this here as we experience it?

The Checkerboard and the Patch – the Endangered Meadows

Returning to thinking more directly about Peninsula Europe. Thinking about restoring certain of the historic processes for producing food for livestock,

returning to former bio-diverse patterns associated with pasturage and farming across Peninsula Europe. Talking about renewing traditional grassland, pasture, and meadow as well as possibly yet to be invented new forms in the cultural landscape that use the meadow as a model. We understand that from an ecological point of view the meadow lands of Europe, once common to the whole landscape, are also a relatively recent phenomena, having developed in the past four or five centuries as a result of forest clearing. Although hardly the main reason for the clearing, it was more efficient to let animals graze in the meadow, than to take them to browse in the forest, as was once done.

The meadows are still maintained in their present vastly reduced form by the grazing of livestock and/or the once or twice annual cutting of hay. We perceive meadows as a kind of agricultural model for a spontaneous, initially unconscious, collaboration between the agricultural pattern of caring for livestock and the ecological pattern of the life web, an automatic byproduct of a sustainable pattern. These cutting and/or grazing patterns had established a meadow ecosystem across Europe of considerable complexity and stability, one of the most successful collaborative and sustainable ventures between our species and the rest of the ecosystem. Therefore, this collaboration, and its history, is of great interest to us. The model it represents can, we believe, set the pattern for other food producing operations. In this behavior pattern the harvest preserves the system. It is a counter theme to the present, almost universal, high intensity/high energy chemically dependent mono-culture farming in which the harvest depletes the system.

Our understanding of the importance of the meadow began in 1993 when the director of the Kunst-und Ausstellungshalle der Bundesrepublik Deutschland, Dr. Wenzel Jacob, asked us if we could invent a work for the roof garden of his exhibition hall. We suggested to him that we could make a meadow as a work of art that would function as a miniature universe of unusual aesthetic and eco-cultural value. **Future Garden, Part I: The Endangered Meadows of Europe** came into being there as a complex extended narrative, a continuously changing living color field that covered the almost 40,000 square feet on the center of the roof top. The roof space was thus transformed into a field upon which a complex drama was enacted.

The drama began with the decision to save a 400 year old meadow from the Eifel by transplanting it to the roof, instead of letting it be torn up and replaced by a housing project. This decision sets the stage. And it was thanks to many ongoing efforts: first the theoretical ones of Dr. Martin Schneider-Jacoby and slightly later of Dr. Wilhelm Barthlott and then the practical ones of Dr. Wolfgang Schumacher and some of his graduate students and of Dr. Gothard Wolf. Both of latter, by providing us with the actual meadows and supervising their continued existence, ensured that we were able to make the work.. Thereafter, sections of other endangered meadows, a wet meadow, a dry meadow and a stone meadow, were combined to make a diverse ensemble. Conversations between the artists and the various botanists and ecologists, ›meadow masters‹ as it were, were reflected in a condensed array of texts, written in both German and English, and set into wooden housings in a series of fence like structures. Photographic images, printed on tile, of meadows from other parts of Europe, echoed the texts and confronted the living meadow. The fencing structures held the story and the images, functioning as both seating and frame. These constructions confronted and co-joined with the viewer and the living meadow in presenting a drama which unfolded to those walking or promenading on the grassy pathway that was the meadow perimeter. The choice of the site, so close to the Bundeshaus, was politically appropriate.

A concept significant to all in the botanical field, but unfortunately seldom in the minds of others, is the fact that an intact meadow ecosystem supports the microscopic life in a stable soil mat as well as invertebrates and insects, various plants, reptiles, amphibians, small mammals and avians, as well as the livestock that graze it.

Interestingly enough, it is the annual or semi-annual cutting of the meadows, timed appropriately so that cutting takes place after the seeds fall from the diverse flowers and grasses, that guarantee the next year's flowering.

The cutting also maintains the system by preventing the natural succession to forest from returning. Thus, **The Endangered Meadows of Europe** was born as a work of art in the artist's sense and has brought forth a world of its own.

The stories unfolded as conversations between ourselves, and others more informed than ourselves, who were reflecting on our concerns for valuing whole systems. Some are excerpted here.

Meadow Stories Text I

Talking to a friend who was an ecologist.
He said
the urgency of the moment
is the disappearance of the meadows of Europe
which are among the richest biotopes remaining
and are everywhere endangered.

Meadow Stories Text II The Meadow from the Eifel

He was a professor of Botany.
His principal studies were European meadows
and the plant groupings within them.

He said
that the term pasture
was used for land that was primarily grazed
and the term meadow was used when cutting
was the primary method of harvesting.
He said
he knew many meadows.
and in the Eifel where he did most of his research.

I said that we were looking at the meadow as a possible model
for other similar
but more intentional forms of eco-cultural collaboration.
and we were working on ways to express this in a work
that we were calling the Endangered Meadows of Europe
and did he know of any meadows nearby
that were in immediate danger and available.

He said that he knew of one
soon to be destroyed by development.
Thus we and many others
began the odd task of rolling up a four hundred year old meadow
from Blankenheim in the Eifel
and transferring it to the roof of the Kunst-und Ausstellungshalle
der Bundesrepublik Deutschland in Bonn.

Meadow Stories Text VII Steppe Meadow Hungary
He was a botanist
working at intercontinental scale with the migration of species
both in the past and in the now.

He said
This is a steppe meadow in Hungary
When you look at the steppe ecology
you should know something of history
since the distribution of plants
reflects the movements of peoples.

He said
when the Huns came from the Asiatic steppes before 200 AD
certain feather grasses and other plants accompanied them.
Plants invaded with the host of Genghis Khan as well.
The Romans imported more than grapevines
on their journeys north.
As the climate warmed
certain orchids migrated north from the near east
as did the poppies which accompanied the wheat plants.

Migrations from the east and the south
followed the flood plains of the Danube and the Rhone
and the meadows in the areas where these rivers come closest
are the richest in immigrant plants.

And although few realize it
these immigrants compose a fair part
of what we now think of as our native environment.

This, the final story, in our own voice, makes a prophesy which we hope will be a self-fulfilling one, for Peninsula Europe as a Future Garden.

Meadow Stories Text XV
»First one and then another then many
asked what we meant by this new metaphor.
The meadow is a teacher for the future and a model.

You said
The meadow represents an old wisdom.
It is humble and unassuming.
Yet it is a vast cultural landscape
a sensual and pleasing many purposed landscape
constructed over millennia
an aesthetic that is no longer being remembered
an information ground that is rapidly being lost.

And you said
Imagine a new forest constructed intentionally over time
with the meadow as a model.
So that this new forest
like the meadow
will be a cultural construction

and will supply food for people and livestock and wood and whatever
as well as cleansing waters and air.

And this newly constructed biodiverse life web
will be useful for many species
for the amphibian the reptile the bird
the insect
and the life in the soil.

And it is in this way
one of us said
that the meadow becomes a model for the future.

And the other said
In their present state
dense with information,
the meadows bespeaks the possibility
of constructing a multi species collaboration
with ourselves and all others involved.
thus the meadow is teacher and model and prophet.

Later, this work developed many lives. It led to projects in Austria, in other parts of Germany, in Denmark and England and even to this book. The first project to be completed was the movement of the stories and fencing structures and the seeds of the meadow on the roof to the park in the Rhineaue to make a new meadow work, which will spread through the parks of Bonn and eventually introduce new elements of biodiversity back into the city.

As we said earlier in other words, all of our work developed out of our initial decision to do no work that did not concern survival – the well being of all the life that comprises the planetary ecosystem of which we are all part. We began with the Survival Series which focused on farming and ideas dealing with farming have continued to pervade our work in one form or another.

For instance, the concept of the harvest preserving the system began in our own work as an odd consequence of searching for a hardy creature that could live under museum conditions, in response to the failure of our catfish to reproduce in an exhibition at the Hayward Gallery in London in 1971. That is to say, could we invent a whole system that acted in a manner similar to a life web in that its over production was harvested for consumption. The inputs available were intelligence, water, light and heat, with the option of adding extra nutrients. Ranil Senanayake brought us a hardy creature from Sri Lanka, the crab, Scylla Serrata Förskal, and after we completed our research for the Sea Grant Agency on decoding the mating and cannibalism behavior of the creature, we began to think about aquacultural possibilities in America as well as in Southeast Asia. We speculated that since we grew our crab from a few ounces to a pound in about 10 months, that an acre of crabs might become a highly feasible venture. Thereafter, we located an inland body of salt water with inexpensive land available as well as inexpensive salt water and a useful sloping configuration of land and the conversation changed into a proposal format. (In the voice of the Lagoonmaker from The Fourth Lagoon – On Mixing and Mapping and Territory)

Thus
We propose an aquaculture installation on the shores of the Salton Sea in the midst of the Colorado Desert of California. This installation would behave like an estuarial lagoon with fresh waters from the All-American Canal and saline waters from the All-American Canal and saline waters from the Salton Sea

which enriched with agricultural wastes will substitute for the nutrient-rich waters which normally accrue to all rivers by the time they have reached their mouths This lagoon will have a total of fifteen ponds arranged in arrays of three. The structure and water flow of any one array is presented by the schematic plan and section. Each array is designed to act as a single system which may be indefinitely repeated. This lagoon represents a design for an assembled life chain whose parts are separated yet whose relationship established by the flow of water permits the development of a self-feeding polyculture system in which the harvest preserves the system.

Thinking about this, the concept of the harvest preserving the system, one can begin to imagine a future forest, a future estuary, a future lake, all taking responsibility for food production and the life web simultaneously. In fact, this work was one of the bases for imagining monoculture Europe becoming a Future Garden, a biologically diverse system behaving sometimes like the meadow and sometimes like a garden, but of yet to be created mutually supporting bio-diverse food producing entities. What icons, texts, models, expressions, discourse, yet to be invented, would or could generate a flow of conversation about Peninsula Europe drifting in this direction, recreating itself into its own garden?

Closing the Circle or Green Heart Vision

In 1994, we were asked to address this about to be massively over stressed place. There was fear that an imminent event would cause the probable destruction of a stable long term cultural landscape. An invitation came from the Cultural Council of South Holland. The request was to make evident the value of the great Green Heart of Holland, so that it might be preserved from development. The Green Heart is essentially the 900 to 1,200 square kilometer farming area and open space, dotted with many small villages and a couple of growing towns, the center around which the cities of Amsterdam, Rotterdam, Haarlem, Den Haag, Dordrecht, Utrecht, et. al., are located. This ring of cities, a collective of about 5 1/2 million people, is called the Randstad. The problem the area faced was economic. And the problem the area faced was ecological. And the problem the area faced was cultural. And the problem the area faced was development.

The issues were quite straightforward. Dutch demographic studies indicated that 600,000 plus houses with relevant infrastructures would be needed to be built in the area over the next 20 years or so. We did the addition. The building of 600,000 houses and relevant support systems would create an economic engine or force of perhaps 120 billion dollars. There was despair among many planners and politicians and large sections of the educated public, if, as was then expected, market forces unmediated determined how these moneys were to be spent. It seemed obvious that the developers would opt for the cheapest land which offered the greatest profit. That land would obviously be the Green Heart. That would mean fragmenting the historic green center which had served as the »green lungs« of the heavily populated cities, which would be further stressed by increased traffic and increased pollution. The historic Dutch dike/sloot/farm/ small village life-style of that area would be threatened as massive development moneys typical for such situations flowed in and as much of the profit would flow out, out of the country into international global development coffers. Moreover, many feared that a proposal for a great new city, with diverse suburbs, needing a large new infrastucture would be built in the green center known as the Green Heart, to compete with the remaining cities of the Randstad, to the benefit of the few and to the disadvantage of the culture as a whole. Urban sprawl would become rampant.

This was the basis of the fear among many planners and politicians – lowland Holland faced the risk of loss of its overall quality of life. Of course, there were others who saw great gain in developing the Green Heart and Los Anglicizing the Randstad. This was roughly the state of the discourse when we engaged it.

Confronting this, in early 1995, we created an installation, with an array of large complicated images, maps and drawings with propositions, reflections, stories, slide projections and a videotape, with forms that we call »cultural icons at scale« which were the expression of a work we called **A Vision For the Green Heart of Holland**. The installation consisted physically of two four m2 maps of Holland, one printed in reverse and five two meter2 drawn images, seven texts and a seven meter in diameter aerial photograph printed on tiles and placed on the floor so that all could see their homes in relationship to the concepts presented. There was also the video element an eight minute aerial tape showing that the Green Heart still existed and was not a fantasy as some claimed and a slide presentation showing local areas where various types of natural succession, such as we predicted for the polders, was already taking place – and was quite attractive – refuting the claims of some that it would be an eyesore! The maps themselves were heavily reworked. The transformations that resulted were the basis of a work of art, produced as a site specific installation developed for the Jerusalem Chapel in the town of Gouda.

Good Government

Looking at the map in silence,
refusing to imagine the Randstad
and the Green Heart
together in an ensemble,
as a site for growth and development
as space for 600,000 houses
with all appropriate infrastructure
to answer the need
for people who would immigrate
or be born to future generations
or who wish to expand their living quarters
but instead imagining
all of the urban places fading back
then
all of the open lands
mostly polder
melding into one land.

And from this envisioning
a new image emerges
where the Green Heart
appears
to undulate through
the whole urban landscape
in long arrays
of polder and farm and wetland
cojoined
which act simultaneously
as separation and boundary
and
as outreach arms from the Green Heart

In this future
the cities secure their cultural identities
by gaining park land borders
improving the quality of the space
they will need to construct housing,
connecting themselves to the Green Heart
and to each other
through park lands at large scale
and gaining the benefits of clean air
and grander vistas
that large open spaces
can offer the urban state.

Simultaneously, in this future
the Green Heart appeared as an island,
bounded partly by water filled Polders,
partly by drier ones, by peat Polders
and clay Polders and mixtures thereof,
modeled mostly
after the Naardemeer bosoms.
All left to develop
or helped to develop
succession ecologies,
becoming in fact
a Bio-Diversity ring,
conceived to express
the full range of ecological possibility
in lowland Holland.

And by so doing,
the Green Heart gains clear definition,
both on the ground
and on the map,
surrounded
by
this Bio-Diversity Ring,
one to two kilometers wide,
about one hundred and forty kilometers
in circumference,
a never before conceived
eco-cultural amenity
that acts also as an air purifying system
and as a water purifying system
and as a water retaining system.

A Bio-Diversity Ring
that acts as transition
between the increasingly urban Randstad
and a clearly defined Green Heart.

Simultaneously,
in this new understanding
the Green Heart clarifies itself
as a village-dike-sloot lifestyle,

pleasing to many
endangered by growth.
The Green Heart clarifies itself
as an 80,000 square hectare farm
with villages and towns as small figures within
reflecting the history of Holland,
a farm presently
endangered by population pressures
and by economic pressures,
in need of valuing and protecting.
The Green Heart clarifies itself
as an open space centering the Randstad
and defining it
as the Randstad defines the Green Heart.

The image completes itself
as alternating figure and field,
a unique eco-cultural feature
landmarking the Randstad
and the Green Heart
as a global city
with a singular topology.

Finally,
in this new vision
a single form is proposed
that
engages directly the land form of Holland,
protecting and enhancing

cultural diversity
while permitting
an increase in bio-diversity.

And the Biodiversity Ring and the park like outreach arms can be paid for, in part, from the fresh water collected by the polders in the Biodiversity Ring and in part by the increases in tax monies that come from development.

In the Green Heart Vision all boundaries have clear existence and explicit uses. Additionally, all boundaries co-join, becoming a new eco-social, eco-political, eco-economic, eco-aesthetic form that we initially called a Cultural Icon. (A sun sign emerging from the map of lowland Holland) The icon made immediately apprehensible the fact that there was more than sufficient open land for development between the ring cities of the Randstad, without needing to infringe on the Green Heart. Neither was there a need to infringe on the vast proposed new park system in order to construct the 600,000 houses said to be necessary.

Both the Green Heart and the Randstad are expressed imagistically and poetically as one place, a reciprocating figure-ground relationship, a yin-yang totality. In contradistinction to normal mapping operations, the biodiversity argument and the cultural and economic arguments are wedded to structure here. We have been told specifically that the principles of this argument have been accepted and are in the plan. That is to say, the region is now being planned as a whole rather than in fragments. Cities are being kept separate by park land, the Green Heart will not be developed, and the Biodiversity Ring, the most original of our ideas, well probably not be done.

We have come to believe that the quality of survival in the largest sense has become a matter of precisely how the co-evolution of cultural diversity and bio-diversity proceeds. If the Green Heart Vision, and the new patterns that give voice to it, can be understood as in some way an eco-cultural stability domain and possibly a dissipative structure of a new sort, then the biodiversity ring coupled with the agricultural center and the horticultural cityscape become the living material available for new structure to form from. The terrain of the ring offers the space for the self-organizing, self-nourishing and self-sustaining forces of the life web to evolve following typical eco-systemic succession behaviors. For the system to be stable three main inputs are required – the waters which will automatically collect, some protection from negative environmental inputs both urban and agricultural and public respect for its boundary conditions. Its feedback into the cultural domain is much needed and economically valuable clean water in large amounts, clarified boundary conditions for both the Green Heart and sections of the cities of the Randstad, new information on ecosystemic regeneration of this type on the various soils. The last element, rarely considered, is a new aesthetic based on relinquishing control and accepting the chance arrangements produced by a continuing succession. As this conversation makes manifest, we see both cultural diversity and biodiversity as having intrinsic value. We see both forms of diversity as the yin/yang of a new cultural landscape well past the middle of its formation.

Casting a Green Net: Can It Be We Are Seeing a Dragon?

We were invited by two cultural institutions, the Liverpool Tate Gallery which joined with the Henry Moore Foundation to form Artranspennine to make a consideration of central England with the initial request to find, construct, or create the mind space and the physical space for a transect or connection between the cities of Liverpool and Leeds, across the Pennine Mountains. Standing back, looking at the map of England, traversing the terrain, we proposed a work that would rhyme the estuaries on both sides of the island, the

Mersey at Liverpool, the Humber at Hull. The word-image pattern that came forth as a result of our process of work was entitled: **Casting a Green Net: Can It Be We Are Seeing a Dragon?** This is the story of the becoming of that work, which is again all about that which we mean by »Every place is telling the story of its own becoming; every place is creating its own history every moment.«

So, a team was formed. Search and research was done. The exhaustion and overload that quiets the mind happened as a sort of defense mechanism against stress. A now informed intuition came into play. Out of this interplay a new work of art emerged, formed by word/image/narrative, an interaction typical of our process. It embodied a conceptual design for making the Transpennine area of North England increasingly self-sustaining, proposing a transformation that would permit the landscape of this predominantly monocultural landmass to enfold into itself an increase in bio-diversity, while not interfering with its diverse sub-cultures or their ability to maintain their integrity. The Dragon image rhymed the estuaries of the Mersey at Liverpool and the Humber at Hull in a manner that identified, enlarged and attempted to connect the multitude of fragmented, biodiverse or potentially biodiverse areas from Liverpool to Hull. It fashioned a green network of sites stretching across the mid-Pennine area of North England, averaging thirty five miles in width and one hundred and ten miles in length. The ›Green Net‹ image supported ideas about the development of economic and cultural diversity as well as biological connectivity. In ›The Dragon‹, these diversities were inter layered, mutually interdependent, potentially self-reinforcing.

The area, bounded east and west by the two coastlines and their estuaries, was thus defined geologically and ecologically. The north and south boundaries, the remnants of the Roman roads north above Manchester and through York and south through Chester, although more randomly chosen, marked certain historic, cultural boundaries. An astonishing image emerged for us when these boundary lines were drawn and the two Pennine Parks outlined. The image read as an awkward, strangely shaped dragon in flight, with a lake for its eye. Its head was at Hull, pointing to the east. Its tail was slightly curved at the estuary of the Mersey, but basically pointed west to the Irish Sea and the Atlantic. The Pennine Parks appeared as wings. The dragon's emergence revealed a new pattern which become progressively more credible as the narrative unfolded image by image in the iconic array.

The ideas were presented on five maps, each about three and a half meters by five and a half meters. Beginning as ordinance maps of North England they were reworked so that the roads dropped back and the rivers, mountains, ecological reserves and urban patterns were accentuated. The area of the maps encompassed about nine million people living variously in its cities, towns, villages and hamlets and on its approximately nine hundred square miles of farming. The Dragon flying across the map, can also be perceived as a metaphor for a new route marked for trade and economic development by the European Union between Limerick and St. Petersburg.

Each map has been transformed to carry a layer of information expressed in an array of poetic narratives that variously imagines the body of the dragon in part as an eco-net, in part as a great green farm, able to compete with conventional industrial farming. The dragon reflects a new eco-urban concept in which the distinct identity of place and the integrity of the Pennines is valued and maintained. Indeed, within this vision many of the economic benefits associated with increased development can take place harmoniously.

We include here the one text that most influences our thinking in the **Peninsula Europe** proposal.

The Great Green Farm

Standing back
looking at the map that gave voice to the domain of the dragon
marking on it all the arable land and pasture land
counting 900 square miles of arable land
seeing the various terrains
and the differing crop distributions.
Thinking about how all that inorganic fertilizer
was forcing plant growth
while destroying topsoil
Knowing a long term positive feedback loop
had been set in place
and was working

I said,
»What if for a moment we saw it as one farm
wherein all farmers
no matter the differences in culture
systems of belief
economic levels
or the size of their terrain
agreed
that incrementally improving their topsoil
while incrementally reducing their dependence
on petrochemical input
was the fundamental pathway to sustainability
over the long term.«

And so
for the moment
we took the decision to think about
how one might add value to the topsoil
for about nine hundred square miles of croplands.
which turns out in round figures to be about 575,000 acres.

Now
it appeared that all the farmers we talked to
whether the few organic or the many agrochemical dependent
whether non-tillage farmers at small scale
or organic farmers at up to 2000 acre scale
Knowing well the consequences of ignoring these issues
We were concerned with the properties and quality
of their topsoil:
Its health, its friability, its ability to retain moisture
and its organic content that is to say its humus content.

For instance
if
there are about 9,000,000 people
living in the domain of the dragon
variously in the cities, the towns, the villages, the hamlets
that stretch across the Pennines
from Liverpool in the west
to Hull in the east

Kartographierung eines großen grünen Netzes über dem Gebiet zwischen den Treffpunkten von Wasser und Land.

2

Nachdenken über das Einbetten einer 2330 km² großen grünen Farm eingebettet in das Netz.

3

Stärken des Netzes durch Entwicklung eines über-urbanen Saumes, wo Wildnis sich mit wachsenden urbanen Formen vermischt.

4

and these nine million people in aggregate
produce domestic waste
of about a thousand pounds per year per person
of which two-thirds is compostable
then we are talking about
two million nine hundred and seventy thousand tons
of compostable organic waste
collectively per year
exclusive of animal waste and sewage sludge,
which calculated
at a loss of mass of 40% during the composting process
has a remainder of about eight tons per acre
spread over a three year rotation
on the 575,000 acres of arable land.
And if industrial waste was responsibly handled
before intermixing with household sewage
then we are looking at 11 or 12 tons per acre.
What would be the value of such an output be
for the production of food?

To find out
we asked our agrochemically dependent farmer
who was intelligently committed to acting
on his concerns for sustainability,
what would it mean if he could spread
eight to twelve tons of humus-like compost on his fields
on a three year rotation cycle.
And he responded
saying that assuming it was disease free and non-acidic
and heavy metals were not present beyond acceptable limits
and assuming a distribution system
which he thought might be quite easy to do
then he could eliminate entirely
his use of phosphates and potash
and reduce his nitrogen input by 60–80%
depending on crop
and
the value to him in monies would be considerable
with a bonus of increased friability]
water retention in the soil
and probable improvement in the quality of food produced.
I said,
»If not here
then elsewhere.«
You said,
»If here
then elsewhere will know how to proceed.«

Is this odd creature, a dragon, acting as a creation of the mind of the designers, ourselves, in a category of its own? From a systems or networking point of view can we be perceived as an environmental feedback loop initiated by two cultural organizations?
Can the dragon have the properties of a state of mind, creating and recreating itself in an ongoing discourse on its own well being? As it does so, can it

set up more complex systems for self-recreation, not unlike the feedback loops of the cell which is a function of living systems. Certainly recycling its waste stream to improve topsoil in food production and evolving a green net by cultural decision suggests this.

For instance

Can we see the dragon within the eco-cultural context as a bi-forcation point?

Can we see it in its own way as an emerging new attractor?

Can it be seen as a pattern of organization that has come into existence as a new dissipative structure whose processes exist as a collective consensus of a multitude of minds where the pattern of organization is held in stability as long as the consensus exists?

These questions can be grouped into a single question. Can it operate in a condition of creative uncertainty since uncertainty is the nature of things. And according to the theory of living systems, mind is not a thing but a process and the organizing activity of all living systems is cognitive activity. (i.e.: a cell that knows what is good for itself, and bad for itself – like food and poison – has cognition and therefore operates within the sphere of mental activity, independent of a central nervous system, etc.) Within the context of the notion that the global landscape is itself Gaia restating itself as an eco-cultural entity, can the dragon be seen as having potential to nest itself within other potentially emerging eco-cultural entities combining and re-combining in such a way that culture and Nature resituate themselves in a new sustainable consciously intended homeostatically balanced state of being? Obviously these ideas also influenced the formation of the **Peninsula Europe** icon.

Therefore, these most recent works explore what we call eco-cultural icons. Their intention in each case is to put on the table a transformation at great scale that we as artists perceive to be imperative and in the public interest as best we can, at the moment, define it. The discipline is to create a text-image ensemble, accessible in nature, whereby extremely complex issues layered and interdependent can be grasped and thought about, felt and responded to, in a very short period of time. We feel most fortunate that, as artists, we have the freedom to set our own agenda and still more fortunate to be invited to do so.

Ideas congruent with systems theory flowed through our work, predating even our knowledge of the meaning of the term. Our thinking, as reflected most strongly in the **Lagoon Cycle**, was based on intuition and prior acquaintance with some guiding principles of Buddhist philosophy. It was also based on paying attention to the ways that natural systems worked to each other's advantage. It was only after about ten years, by the time of the **Green Heart Vision** or **Casting a Green Net**, that our intellectual grasp of theory began to merge with our intuitive one. But these ideas were in the air. Paying attention to natural systems of necessity led to concern about the condition of the environment, the fragmentation and degradation of the ecology and the impoverished state of much of our city and regional planning systems which must deal with the political, social and economic ramifications that follow from this degradation. Thus we have explicitly made the environment our subject matter. Now these areas are also to a greater or lesser extent influenced by systems theory, which thus came into play in our work, although indirectly, always within the context of art making. For example, regardless of any whys and wherefores, as artists we always knew that moments of stress and overload could also be times of the greatest creativity and invention. Thus, it was easy to trans-

late this into a belief that at any point of instability or disequilibrium in a system, even at the point of systemic collapse, new patterns of organization can, do, perhaps even must, emerge. And the new patterns that emerge have, we believe, embedded in them the power and potential, to embody new structures that will in turn bring new forms into being. These new forms, in their turn, can feed energy or value back through a system. Thereafter these feedback loops can, if generating greater good for the benefit of the many, acquire greater complexity and if still tending to increase the greater good, can lead to systemic stability. The reverse, obviously, is also true.

We see Peninsula Europe as a potential entity in the initial moments of formation. We see it as wanting to happen yet existing in a state of imbalance, as the market place, inevitably driven by individual self-interest, destabilizes the community interests which could, if given full play, permit Peninsula Europe to transform itself into what we call a stability domain. We believe, as do many, that both cultural forms, through the continuing transformation flowing from discourse, and the forms in nature, through the processes of existing and evolving, are of necessity ever changing.

Despite flux, indeterminacy and ongoing change, both cultural systems and eco-systems, individually or in transaction, maintain their stability, their continued existence, by virtue of taking in from their environments that which appear necessary for their well-being. To take in from the environment carries with it prima facia the requirement to release that which is unused, the detritus, back into the environment. There the detritus can be processed and continually recycled. Eco-systems do this well, leaving little or no waste. Most cultural systems do this poorly as they consume or otherwise destroy the natural balance around them, and most recently that imbalance is accelerating as they produce wastes that are toxic and not recyclable by natural processes. Therefore the co-evolutionary processes of culture and nature in the now are moving inevitably towards an increasingly unhealthy, potentially mutually destructive, state of imbalance.

This story itself is reformed by the opportunity of the moment by the people in the moment and complicates itself, modifies itself, confirms itself, by its continual retelling. The story appears and reappears in a consensus of beliefs, often unspoken, about what is right or wrong, what is desirable and what is not. And even what the consensus disagrees with but doesn't feel strongly enough to prevent becomes, none-the-less, part of shaping the physical processes and cultural forms of everyday life. Thus we believe that the medium of language, itself continuously changing, endlessly diverse, self-complicating, is a self-making, other-making, process. Thus we see language, employed in the storytelling mode. as the medium, or discourse continuum, which powers the creativity and improvisation cultures use to create themselves and their habitats. Indeed the processes of grouping and regrouping. restoring, using, abandoning, all initially language based, are the process that have always generated our cultural landscape.

We see the breath pause, the moment of self-reflection or collective reflection before action, as that moment, however long or short, participated in by however many, as signifying the differences between our community and that of the bacteria. None-the-less. we believe that ›conversation‹, in whatever language, be it chemical or verbal, and its outcome, is the basis for all decision making. The actions which it leads to then group and regroup to form the cultural landscape. This process is the story of the becoming of our now.

And from our perception of our now
the story of it
the song of it
the panorama of it
the dramatic properties of it
the improvisation and creativity of it
has begun to take on the quality of a monotone
as sameness begets sameness.

It is in this breath pause or moment of reflection that conversation can, as it so often has, drift in another direction. The other direction or space of mind we argue for here opens with a question derived from how the culture of bacteria created their world, which is our world. What are the opportunities in the now that will let sameness creation and diversity creation co-evolve to each other's advantage?

For **Peninsula Europe** we propose a new form, a stability domain. This would be based on the principles that were variously expressed in **The Serpentine Lattice**; **The Shape of Turned Earth: A Brown Coal Park for Südraum Leipzig**; **The Mulde Einzugsgebiet**; **Breathing Space for the Sava River**; **A Vision for the Green Heart of Holland**; **Casting a Green Net: Can it be we are seeing a Dragon?** as well as **Future Garden, Parts 1,2 and 3** and inferred in **The Sacramento Meditations**, **Tibet is the High Ground** or **The Lagoon Cycle** and other works. These variously, sometimes only implicitly, proposed new ways of thinking about niches in the biosphere wherein cultural processes and forms can, over time, become nurturant and wastes can become either harmless or food for other lives. These works also proposed ways in which the harvesting processes, when appropriate, can be modified to preserve the life of the soil and the cycle of growth.

To bring about these outcomes requires accepting limits to growth. Thinking about the quality of life and well-being must, we believe, be disassociated from the modernist notion that continuous growth is the only avenue to well being. We believe a currency reevaluation needs to happen in which the currency of growth and the acquisition of wealth is re valued, re balanced, if you will, in terms of correlation with the currency of intrinsic worth and well-being. The proposal for Peninsula Europe that follows is our first approximation towards that end.

Kultur 2000

les Abattoirs

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